a plurality of modified oligonucleotide compositions, each composition comprising a plurality of oligonucleotides stably associated with a distinct area of the support surface, wherein the oligonucleotides of each composition are characterized by:

a binding affinity to a complementary sequence greater than the corresponding binding affinity of a non-modified oligonucleotide having the same sequence;

a substitution at a 2' position of the ribose group, said substitution distinguishing said oligonucleotide from naturally occurring RNA or DNA; and

a pH stability of at least one hour at 37°C at a pH in a range of about 0.5 to 6;

wherein the associated oligonucleotides of one distinct area of the array exhibit substantially the same T_m when bound to a target nucleic acid as oligonucleotides of another distinct area of the array.

35. (New) The array of claim 34, wherein the modified oligonucleotides further comprise an end block at the 3' end and exonuclease resistance of at least twice that of a naturally occurring oligonucleotide having the same number of residues.

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36. (New) The array of claim 34, wherein the modified oligonucleotides further comprise an end block at the 5' end and exonuclease resistance of at least twice that of a naturally occurring oligonucleotide having the same number of residues.

37.(New) The array of claim 34, wherein the modified oligonucleotides of each distinct area of the array exhibit substantially the same T_m.

38.(New) The array of claim 34, wherein the modified oligonucleotides of a distinct area are selectively designed to hybridize to RNA.

39.(New) The array of claim 34, wherein the modified oligonucleotides of a distinct area are selectively designed to hybridize to DNA.